PerthAirport | New Runway Project

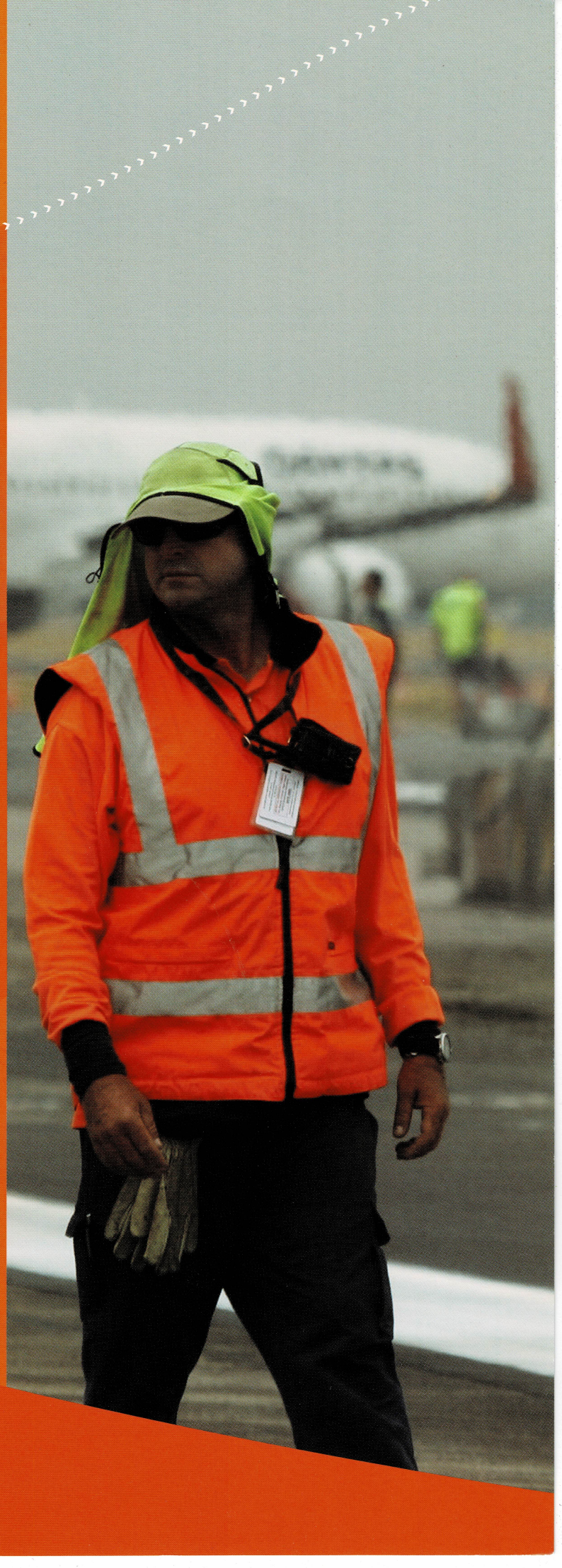
A significant construction project

The new runway is a complex, large scale civil engineering project that will take between four and five years to construct, including airspace design and testing. The new runway will allow better management of the growth in air-traffic, and improve efficiency, customer service and the effectiveness of operations.

Sustainable
Working towards sustainable development of Perth Airport

Creating employment
During construction, around 500 full-time jobs will be created in Perth

Investing in Perth
Part of a $2.5b privately funded investment program over the next decade for Perth Airport



What does construction a new runway involve?

The new runway will occupy 293-hectares, be 3,000 metres long and will be located parallel to the existing main runway with a 2-kilometre separation.

The new runway is a complex, large scale civil engineering project that will take between four and five years to construct. In addition to the civil works, technical elements related to aircraft landing and navigation systems will be installed and flight testing will be undertaken.

Although a contractor has not been appointed, it is anticipated that there will be one main contractor who will have the overall responsibility for the delivery of the project, and specialist sub-contractors will be engaged when needed.

The main contractor will have responsibility for:

- developing the methods of construction,
- determining the project schedule to meet the timeline, and
- developing and implementing the construction environmental management plans.

Due to the scale of the site, it is likely that construction works will overlap and that there will be multiple worksites in operation at one time. This will allow efficient use of plant and machinery and help in meeting the project timeline.

Why does it take 4-5 years to construct?

The New Runway Project involves more than just the runway infrastructure, and includes the following key infrastructure elements:

- a new runway, 3,000 metres long and 45 metres wide, with associated shoulders, blast pavements and runway end safety areas that are provided for the safety of aircraft operations,
- approximately nine kilometres of taxiways to provide efficient aircraft taxiing between the new runway and terminals,
- runway and taxiway ground lighting to provide directional guidance during restricted visibility conditions, such as night-time and heavy rainfall,
- visual guidance systems, such as high intensity approach lighting and precision approach-path indicators, that are used by pilots to visually identify the runway and align the aircraft for landing,
- air navigation systems, such as an instrument landing system, that transmit accurate vertical and horizontal guidance for pilots,
- a vehicle-access road around the perimeter of the new runway area to maintain security inspections and provide access for maintenance and operational vehicles,
- a new airside security fence and electronic security system to meet aviation security requirements,
- a new airside and landside emergency vehicle staging area,
- realignment of Perth Airport's two main drainage channels to manage stormwater and groundwater flows around the new runway and taxiways,
- provision of additional of Aviation Rescue and Fire Fighting (ARFF) facilities to ensure a compliant ARFF service, and
- relocation of all affected services such as high-voltage power, sewer, potable water, irrigation water, and communications.

$520m

Estimated cost for approvals, design and construction of the new runway

71,600

Number of truck loads required to transfer fill to site

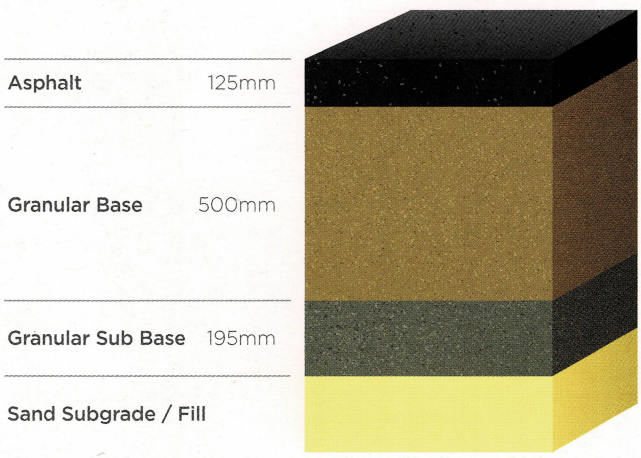
4–5 years to build

Construction timeframe to build the runway

How is a runway built?

Runway pavement is around twice as thick as a suburban road as it needs to be strong enough for aircraft that can weigh over 600 tonnes.

Similar to the existing runway pavements at Perth Airport, the new runway pavement will comprise of a thick sand subgrade layer built to an even level for over three kilometres, then layers of dense-crushed rock and gravel, a bitumen prime coat to seal the surface, and finally a thick layer of asphalt.



1,500,000m³

approximate amount of sand required to be imported

Construction Management Plan

A detailed construction management plan will be prepared by the contractor prior to works starting. The plan will cover items such as:

- site management team, roles, responsibilities,
- emergency plans for accidents, spills and airport operational incidents etc.,
- site safety, materials handling etc.,
- noise and vibration management,
- sustainable construction plan,
- dust control,
- site security,
- approvals and permit system,
- airspace penetration assessments,
- interfaces with public areas, roads and traffic plans,
- how the works will be managed in accordance with the contract,
- define the program and construction targets,
- define the site constraints such as stormwater management, contaminated materials management and wastewater management,
- detailed risk assessment,
- materials sources, testing and quality assurance procedures,
- detailed demolition plans,
- excavation plans, and
- Method of Works Plans, in accordance with the CASR 1998 MOS Part 139. These plans detail the works that will interface with the operational airfield. Such works will take place generally towards the end of the project when the new security fence has been joined to the existing fence and the site is designated an airside security zone.

A Construction Environmental Management Plan (CEMP) will also be required, which also covers some of these items, such as noise and vibration management and dust control.

Hours of work

Work will generally take place between 7.00 am and 7.00 pm, Monday to Saturday. To minimise interruption to airfield and aircraft operations, particularly when works are required to interface with existing operations, construction activities may take place outside these hours.

Given the location of the new runway construction site, it is unlikely that there will be any significant impact to surrounding communities, and wherever possible, Perth Airport will work within the local government guidelines which nominate construction hours between 7.00 am to 7.00 pm, Monday to Saturday.

Airspace and Fight Path Design

In parallel to the construction of the new runway on ground infrastructure, Airservices will undertake the final design of the airspace and flight paths. The final design will commence approximately three years prior to the opening of the new runway.

Commissioning and flight tests

When all construction works are completed, a detailed commissioning process will commence that may take between six to 12 months to complete.

Airfield lighting and the Instrument Landing System will be checked on the ground and then engineers will assess and adjust the lighting during a series of flight checks where light aircraft or helicopters will fly the designed approach paths. This is carried out by the Civil Aviation Safety Authority.

Finally, changes to Perth Airports operating manuals, emergency and transport security plans will be made and extensive training in new procedures to be used by air traffic control, Aviation Rescue and Fire Fighting and Perth Airport staff will be undertaken.

Following successful commissioning, the new runway will be deemed operational and ready to commence regular aircraft operations.

WAC1964 05.18

FIND OUT MORE

For more information about the new runway project and to register to receive updates visit **newrunway.com.au**

facebook.com/perthairport
twitter.com/@PerthAirport
instagram.com/perthairport